

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

**MEMO TO:** Timothy J. Dwyer, Technical Director  
**FROM:** Timothy Hunt and Rory Rauch, Pantex Site Representatives  
**DATE:** 17 April 2009  
**SUBJECT:** Pantex Plant Weekly Report

**Combustible Controls:** During a walkdown of the Zone 12 south outside areas, it was observed that more than a dozen locations had accumulated relatively large quantities of combustible materials (e.g., tall grass, tumbleweeds, tires). There is a technical safety requirement that states "outside combustible controls shall control the quantity of combustible material near magazines, buildings, ramps, corridors ..." The applicable work instruction indicates that combustible materials, including vegetation, must be controlled within 50 feet of buildings, ramps, docks, and corridors. In the areas observed, the combustibles were in contact with the buildings/ramps. A B&W Pantex fire protection engineering evaluation determined that the subject areas did not pose a significant threat to material or operations inside the facilities; however, the areas will be cleaned up on a priority basis as a good housekeeping measure.

**Special Nuclear Material (SNM) Transport:** B&W Pantex radiation safety personnel reviewed a proposal by the SNM Division to use unsealed transportation carts to move pits between different bays of a storage and evaluation facility. The primary radiological consideration is the lack of continuous real-time air monitors (CAMs) in the corridor that connects the various bays. The moves would be considered bare plutonium pit handling operations, which normally require alpha CAMs to be present in the event of a breach. The radiation safety evaluation concluded that an exception to the real-time monitoring requirement could be granted if the SNM cart is modified to reduce the potential for a breach and a procedural requirement is implemented that minimizes the time a pit spends in the corridor.

**W78 and Nuclear Explosive Tester (NET) Operations:** Last week, NNSA conducted a Nuclear Explosive Safety (NES) Change Evaluation (NCE) of the process and tooling changes needed to implement a 5 kV static dissipative environment for W78 disassembly and inspection (D&I) operations. These changes were sought after a process review identified electrostatic discharge hazards similar to those that led to the suspension of W76 operations last summer. The NCE group identified no findings; however, they did identify a recurring problem involving the failure of B&W Pantex change control to initiate an independent safety assessment (ISA) of each NET when its operating environment has been changed, as required by the interagency procedure EP401075, *Electrical Testers for Use with Nuclear Explosives at DOE/NNSA Facilities*. As an example, for W78 D&I operations, an ISA of the PT4030 in the new 5 kV environment was never performed. This issue was first identified during the B83 SS-21 NES study and was later captured globally as a post-start finding during the approved equipment program NES master study. The latter study's finding was closed in February 2009, but the recurrence of this issue indicates the actions taken to close the finding were ineffective. The NCE group found no NES concerns with the W78/PT4030 interface in the new environment, but expressed concern that other NETs may have changed operating environment without an ISA.

**Conventional High Explosive (CHE) Separation:** This week, manufacturing executed the first recovery procedure following last week's charge separation activity that resulted in significant CHE cracking. The charge separation fixture was successfully removed and it was determined the charges had separated. The CHE under the fixture was found to be undamaged. Based on this information, B&W Pantex and the design agency (DA) believe the remainder of the process can be executed without any tooling modifications or deviations. Recovery actions will resume after the DA verifies the weapon response for the CHE in its current state.